AMSAT News Service Weekly Bulletins
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|               Relayed from AMSAT BBS  NETWORK                |
|                N8EMR's Ham BBS, 614-895-2553                 |
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SB ALL @ AMSAT $ANS-166.01
FD '91 OSCAR STATION PLANNING

HR AMSAT NEWS SERVICE BULLETIN 166.01 FROM AMSAT HQ
SILVER SPRING, MD JUNE 15, 1991
TO ALL RADIO AMATEURS BT

AMSAT Urges All To Include An OSCAR Station During FD '91 June 22-23

Field Day '91 is only one week away and AMSAT once again encourages all radio amateurs involved in FD planning to consider including an OSCAR station at the FD site. A simple OSCAR station could easily be set up for Mode A (up 2M, down 10M) with a 2M vertical and a dipole antenna, a HF rig for the downlink, and a 2M all-mode rig for the uplink. To help facilitate FD planners, a complete frequency guide for RS 12/13 will be included in this week's AMSAT News Serve (ANS) bulletins. Also, a partial listing of AOS/LOS times are included for selected cities across the US. For those who are near to any of these cities, the times should be close enough for FD purposes. The selected passes were chosen because of their high elevations during the FD operating period beginning next weekend at 18:00 UTC June 22-23. Using the non-tracking antenna system mentioned above, QSOs on RS 12/13 should be very easy even in the FD environment.

For those who will not be out at a FD site but will be at your OSCAR station, you can help those at FD sites make OSCAR contacts. Please remember that there may be "novices" on the OSCARs that weekend who will need your help as they make that all important FD contact for bonus points under "less-than-optimium" conditions. For those who will be at home during FD, you too can join in the fun by running Class 1D during FD. As amateur radio satellites become more numerous, their utility during emergencies can be demonstrated during an FD experience. So "good luck in the contest and QRZ FD!"

/EX
SB ALL @ AMSAT $ANS-166.02
RS 12/13 FREQUENCIES

HR AMSAT NEWS SERVICE BULLETIN 166.02 FROM AMSAT HQ
SILVER SPRING, MD JUNE 15, 1991
TO ALL RADIO AMATEURS BT

RS 12/13 Radio Frequency Guide & Beacon Data

		RS 12	RS 13
MODE "A"	uplink	145.910-145.950	145.960-146.000
	downlink	29.410- 29.450	29.460- 29.500
	beacon	29.4081 (or 29.4543)	29.4582 (or 29.5043)
MODE "K"	uplink	21.210- 21.250	21.260- 21.300
	downlink	29.410- 29.450	29.460- 29.500
	beacon	29.4081 (or 29.4543)	29.4582 (or 29.5043)

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MODE "T"       uplink  21.210- 21.250                  21.260- 21.300
             downlink 145.910-145.950                 145.960-146.000
               beacon 145.9125 (or 145.9587)          145.8622 (or 145.9083)

MODE "KA"      uplink  21.210- 21.250                  21.260- 21.300
                       145.910-145.950                 145.960-146.000
             downlink  29.410- 29.450                  29.460- 29.500
               beacon  29.4081 (or 29.4543)            29.4582 (or 29.5043)

MODE "KT"      uplink  21.210- 21.250                  21.260- 21.300
             downlink  29.410- 29.450                  29.460- 29.500
                       145.910-145.950                 145.960-146.000
               beacon  29.4081 (or 29.4543)            29.4582 (or 29.5043)
                       145.9125 (or 145.9587)          145.8622 (or 145.9083)

                              Autoanswer "Robot"

MODES     A; K; T; KA; KT                              A; K; T; KA; KT
uplink    21.1291 and/or 145.8308                      21.1385 and/or 145.8403
downlink  29.4543 and/or 145.9587                      29.5043 and/or 145.9083

T E C H N I C A L    D A T A
                                   RS 12           RS 13

 DC  POWER:
 All system OFF                   4.6 W            3.5 W
 All system ON (max. output)       35 W             25 W

 RF OUTPUT POWER:
 Beacon and "Robot"(low/high)  0.45/1.2 W        0.45/1.2 W
 Transponder TX (29 or 145)    about 8  W        about 8  W

/EX
SB ALL @ AMSAT      $ANS-166.03
RS 12/13 AOS/LOS TIMES FOR FD

HR AMSAT NEWS SERVICE BULLETIN 166.03 FROM AMSAT HQ
SILVER SPRING, MD JUNE 15, 1991
TO ALL RADIO AMATEURS BT

RS 12/13 AOS & LOS Times For Selected Cites For Field Day '91

SCHEDULE FOR SATELLITE RS-12/13 FOR Los Angeles
  DATE   AOS TIME     MAX EL TIME    LOS TIME       MAX EL    AZ @ MAX EL TIME
 22JUN91 21:15:05       21:23:51     21:32:38          46         283
 23JUN91 06:31:53       06:39:18     06:46:44          16         071
 23JUN91 08:16:30       08:25:20     08:34:11          65         272

SCHEDULE FOR SATELLITE RS-12/13 FOR Dallas
  DATE   AOS TIME     MAX EL TIME    LOS TIME       MAX EL    AZ @ MAX EL TIME
 22JUN91 19:29:30      19:38:25      19:47:21         68          283
 23JUN91 06:31:49      06:40:45      06:49:40         85          052

SCHEDULE FOR SATELLITE RS-12/13 FOR Anchorage
  DATE   AOS TIME     MAX EL TIME    LOS TIME       MAX EL    AZ @ MAX EL TIME
 22JUN91 23:07:27      23:16:23     23:25:19         80          095
 23JUN91 00:54:05      01:02:43     01:11:21         34          306
 23JUN91 02:43:04      02:50:30     02:57:56         15          332

SCHEDULE FOR SATELLITE RS-12/13 FOR Chicago
  DATE   AOS TIME     MAX EL TIME    LOS TIME       MAX EL    AZ @ MAX EL TIME
 22JUN91 19:32:47      19:41:29     19:50:11         40          287
 23JUN91 04:44:02      04:52:21     05:00:41         28          069
 23JUN91 06:29:33      06:38:10     06:46:48         46          273
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SCHEDULE FOR SATELLITE RS-12/13 FOR New York
  DATE   AOS TIME     MAX EL TIME    LOS TIME       MAX EL    AZ @ MAX EL TIME
 23JUN91 04:44:31      04:53:26     05:02:22         72          073
 23JUN91 06:31:06      06:38:23     06:45:40         17          279
 23JUN91 16:31:13      16:39:06     16:46:59         24          083

SCHEDULE FOR SATELLITE RS-12/13 FOR Atlanta
  DATE   AOS TIME     MAX EL TIME    LOS TIME       MAX EL    AZ @ MAX EL TIME
 22JUN91 19:31:11      19:39:22     19:47:33         26          287
 23JUN91 04:46:46      04:55:01     05:03:17         29          075
 23JUN91 06:32:09      06:40:33     06:48:57         35          274

SCHEDULE FOR SATELLITE RS-12/13 FOR Boston
  DATE   AOS TIME     MAX EL TIME    LOS TIME       MAX EL    AZ @ MAX EL TIME
 23JUN91 02:59:17      03:06:34     03:13:51         15          063
 23JUN91 04:44:07      04:53:03     05:01:58         87          002
 23JUN91 06:30:54      06:37:45     06:44:35         14          282

SCHEDULE FOR SATELLITE RS-12/13 FOR Detroit
  DATE   AOS TIME     MAX EL TIME    LOS TIME       MAX EL    AZ @ MAX EL TIME
 22JUN91 19:33:29      19:41:53     19:50:17         30          289
 23JUN91 04:43:54      04:52:31     05:01:09         39          071
 23JUN91 06:29:41      06:38:01     06:46:21         33          275

SCHEDULE FOR SATELLITE RS-12/13 FOR New Orleans
  DATE   AOS TIME     MAX EL TIME    LOS TIME       MAX EL    AZ @ MAX EL TIME
 22JUN91 19:29:22      19:37:51     19:46:19         37          282
 23JUN91 04:48:22      04:55:48     05:03:14         16          073
 23JUN91 06:32:55      06:41:41     06:50:27         56          272

SCHEDULE FOR SATELLITE RS-12/13 FOR St Louis
  DATE   AOS TIME     MAX EL TIME    LOS TIME       MAX EL    AZ @ MAX EL TIME
 22JUN91 19:31:38      19:40:24     19:49:11         45          285
 23JUN91 04:45:18      04:53:11     05:01:03         21          070
 23JUN91 06:30:22      06:39:08     06:47:55         56          272

SCHEDULE FOR SATELLITE RS-12/13 FOR Denver
  DATE   AOS TIME     MAX EL TIME    LOS TIME       MAX EL    AZ @ MAX EL TIME
 22JUN91 19:31:25      19:40:16     19:49:07         62          089
 22JUN91 21:18:37      21:26:25     21:34:14         20          292
 23JUN91 06:29:36      06:38:23     06:47:09         51          074

NOTE: ALL AOS/LOS/MAX EL TIMES ARE IN UTC!!

/EX
SB ALL @ AMSAT      $ANS-166.04
NEW AO-13 TRANSPONDER SCHED

HR AMSAT NEWS SERVICE BULLETIN 166.04 FROM AMSAT HQ
SILVER SPRING, MD APRIL JUNE 15, 1991
TO ALL RADIO AMATEURS BT

New AO-13 Spring Schedule, AO-10 Not Presently Available

The newly announced AO-13 transponder schedule which is expected to commence
19JUL91 and will continue thru 12AUG91 is as follows:

 Mode-B  : MA 000 to MA 165 !
 Mode-JL : MA 165 to MA 190 !
 Mode-LS : MA 190 to MA 195 !
 Mode-S  : MA 195 to MA 205 ! <= Mode-B transponder is OFF !!
 Mode-B  : MA 205 to MA 256 !  Perigee eclipses, (max 29 mins)
 Omnis   : MA 240 to MA 060 !       until end September.
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Please DON'T uplink to mode-B 195-205; it interferes with Mode S

Once Magnetorquing is completed the anticipated Spacecraft attitude will be:

BLON = 210 BLAT = 0

James Miller, G3RUH, will be commanding AO-13 to adjust the spacecraft's angle to the sun to allow for maximum illumination of the solar panels. This is accomplished by sending current through specially designed electromagnets aboard AO-13. This procedure is known as magnetorquing. As the satellite approaches perigee (the closest point to earth during the orbit) the electromagnets interact with the earth's magnetic field. This results in James being able to maneuver AO-13 (ever so slowly) in such a way as to allow the solar panels to receive a greater amount of sunlight.

For the first time this "routine" maneuver is complicated by the need to magnetorque through solar eclipses from MA 246-256. During eclipses the satellite loses its celestial marker (the Sun). In addition, when BLON reaches 203 degrees, Sun Angle will be less than 8 deg, and the Earth sensor will trigger on the Sun, which causes James to temporarily lose the attitude determination capability. Thus the last leg of the attitude change will be done "open-loop". James will be aided by a new magnetorquing simulator MAGSIM to help him predict how the spacecraft will react during the magnetorquing. Stay tuned to ANS to see how he does.

Currently, OSCAR-10 is not receiving sufficient solar panel illumination. PLEASE DO NOT attempt to use OSCAR-10 until further notice. This period of dormancy is expected to end soon. As soon as OSCAR-10 can support Mode-B transponder operations it will once again be released for general use. Early reports of OSCAR-10's beacon returning to full strength can be sent to VK5AGR @ PACSAT-1 (aka AO-16), @ UOSAT-3 (aka UO-14), @ 8J1JBS (aka FO-20), or @ VK5WI. 73, Graham VK5AGR

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Gary W. Sanders (gws@n8emr or ...!osu-cis!n8emr!gws), 72277,1325
N8EMR @ N8JVY (ip addr) 44.70.0.1 [Ohio AMPR address coordinator]
HAM BBS 614-895-2553
Voice: 614-895-2552 (eves/weekends)